



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 442,038	11 17 1999	YOSHIYUKI YONEDA	360942A	5343

23850 7590 12 07 2001

ARMSTRONG, WESTERMAN, HATTORI,
MCLELAND & NAUGHTON, LLP
1725 K STREET, NW, SUITE 1000
WASHINGTON, DC 20006

EXAMINER

TRAN, THANH V

ART UNIT	PAPER NUMBER
----------	--------------

2814

DATE MAILED: 12 07 2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/442,038

Applicant(s)

YONEDA ET AL

Examiner

THANH V TRAN

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 5, 7-10, 15, 18, 20-22, 27-41 and 44-50 is/are pending in the application.
- 4a) Of the above claim(s) 27-33 and 39-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 5, 7-10, 15, 18, 20-22, 34-38 and 44-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on Nov 17, 2001, paper #8. However, figure 84A needs to be revised according to red corrections.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

Claims 2,7-9,15, and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroshi (Reference AL of IDS, paper No. 4).

Hiroshi discloses a device comprising:

a chip 13;

a resin package 16 sealing the chip, the resin package having resin projections located on a mount-side of the resin package (Fig. 3);

the chip being provided on the first resin portion 11 and covered by the second resin portion 16;

connecting parts having bonding wire 15 and connection electrode 13a ;

metallic films 12 provided to the connection electrodes of the connecting parts.

Referring to figure 7, the resin projection 38 having through hole 34 which the connection electrodes 33 extend to the metallic film 32 as claimed in claim 9;

Art Unit: 2814

3. Claims 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Atsushi. (JP patent # 05-218509).

Atsushi discloses a device comprising :

A chip 3;

A resin package having a first resin portion 1 and a second resin portion 5; the chip being provided on the first portion 1 and covered by the second resin portion 5;

The connecting parts having bonding wires 4 and connection electrodes 2;

The connection electrodes being provided on the first resin portion and projecting therefrom;

The metallic films respectively provided to the connection electrodes of the connection parts (Fig. 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 37-38 and 44-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshi in view of Hosomi et al. (previous applied).

Hiroshi discloses most aspects of the instant invention (paragraph 2) except for the metallic films comprising a plurality of metallic layer which are stacked and the connecting parts comprising bumps provided between the electrode pads of the chip

Art Unit: 2814

5. Referring to figure 11, Hosomi et al. teach forming a metallic films 3 comprising a plurality of metallic layer which are stacked and the connecting parts comprising bump 6 provided between the electrode pads of the chip and the metallic films to improve intensity of adhesion between the bump electrode and the electrode pad (column 1, lines 29-30 and 32-33). It would be obvious to one having ordinary skill in the art of the time the invention was made to form a bump between the electrode pads of the chip and metallic films as taught by Hosomi et al. in the device of Hiroshi to improve intensity of adhesion between the bump electrode and the electrode pad.

Response to Arguments

6. Applicant's arguments with respect to claims 2,5, 7-10,15,20-22, 34-38 and 44-50 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be fax to Art Unit 2814 via the Art Unit 2814 Fax Center located in Crystal Plaza 4, room 3C23. The faxing of such papers must conform with the notice published in the official Gazette,1096 OG 30(15 November 1989). The Art Unit 2814 Fax Center number is (703)308-7722 or -7724. The Art Unit 2824 Fax Center is to be used only for papers related to Art Unit 2814 applications.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THANH V TRAN whose telephone number is 703-306-0208. The examiner can normally be reached on 8:00AM-5:30PM Monday

Art Unit: 2814


9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306 2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703 -308-7722 for regular communications and 703 -305-3431 for After Final communications.

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

11. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S Class/Subclass(es): 257/730,734,736,737,689,700 438/26,611-614	11/26/01
Other Documentation:	
Electronic Database(s): East (USPAT)	11/26/01

Thanh Tran
November 29, 2001


OLIK CHAUDHURI
SUPERVISORY PATENT EXAMINER
TECHNICAL